

METHODS AND APPARATUS FOR VISUALIZING LOW CONTRAST MOVEABLE OBJECTS

ABSTRACT OF THE DISCLOSURE

Some configurations of the present invention provide a method for locating a low contrast movable object coupled mechanically to a marker object in a series of image frames that include images of the low contrast object and the marker object. The method includes locating the marker object in a first selected frame of the series of image frames, selecting a patch of the first selected frame as a template of the marker object, and utilizing the template of the marker object to estimate a location of the marker object in a second selected frame of the series of image frames. The second selected frame is registered with the first selected frame utilizing the estimated location of the marker object in the second selected frame. The registered first selected frame and the second selected frame are fused to thereby enhance the contrast of the low contrast moveable object.